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| APPLICATION NO.                           | FILING DATE   | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---------------|----------------------|---------------------|------------------|
| 10/552,808                                | 10/11/2005    | Bernhard Gleich      | DE 030124           | 5527             |
| 24737                                     | 7590          | 03/24/2010           | EXAMINER            |                  |
| PHILIPS INTELLECTUAL PROPERTY & STANDARDS |               |                      | GUPTA, VANI         |                  |
| P.O. BOX 3001                             |               |                      | ART UNIT            | PAPER NUMBER     |
| BRIARCLIFF MANOR, NY 10510                |               |                      | 3768                |                  |
| MAIL DATE                                 | DELIVERY MODE |                      |                     |                  |
| 03/24/2010                                | PAPER         |                      |                     |                  |

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

|                              |                        |                     |
|------------------------------|------------------------|---------------------|
| <b>Office Action Summary</b> | <b>Application No.</b> | <b>Applicant(s)</b> |
|                              | 10/552,808             | GLEICH, BERNHARD    |
|                              | <b>Examiner</b>        | <b>Art Unit</b>     |
|                              | VANI GUPTA             | 3768                |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 04 January 2010.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-14 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-14 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | Paper No(s)/Mail Date. _____ .                                    |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ . | 5) <input type="checkbox"/> Notice of Informal Patent Application |
|  | 6) <input type="checkbox"/> Other: _____ .                        |

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. ***Claims 1 – 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kraus, JR. et al. (US 6,470, 220 B1) in view of Wang et al. (US 6,940,286 B2).***

***Regarding Claim 1,*** Kraus, JR. et al. (hereinafter *Kraus*) discloses a device for examination and use of an electrical field in a magnetic gradient field, containing magnetic particles in an examination area of an object under examination, comprising

a) at least one first arrangement for determining the spatial distribution of magnetic particles in at least one examination area of the examination object, comprising a means for generating a magnetic field with such a spatial profile of the magnetic field strength that a first sub-zone with low magnetic field strength and a second sub-zone with a higher magnetic field strength are produced in at least one examination area, a means for detecting signals (“SQUID,” col. 7, ll. 60 – 67) which depend on the magnetization in the examination object, especially in the examination area, influenced by a local change in the particles, together with a means for evaluating the signals to obtain information about the, especially time-variable, spatial distribution of the magnetic particles in the examination area (col. 13, ll. 9 – col. 14, line 36).

However, Kraus does not suggest the second arrangement of Claim 1.

Nonetheless, Wang et al. teaches at least one second arrangement, comprising at least one electrical transmit and/or receive unit, comprising at least one voltage generator, at least one terminal contact connected to the voltage generator and applicable and/or fastenable to an object under examination (*fig. 1; Abstract; col. 4, ll. 60 – 65*). It would be have been obvious matter of design choice to include a ground terminal, as one of ordinary skill in the art would be aware, for safety reasons so as to not electrocute a patient during examination.

It would have been prima facie obvious to modify Kraus to with Wang et al. to obtain additional information such electrical impedance distribution (col. 2, ll. 38 - 50) to complement the spatial distribution of magnetic particles studies performed by Kraus.

**Regarding Claim 2**, Wang et al. discloses that the device comprises at least one pair of contact electrodes, especially a plurality of pairs of contact electrodes, for recording potential differences (Abstract; and col. 5, ll. 1 – 55).

**Regarding Claim 3**, Wang et al. teaches that the device is characterized by at least one voltage measuring unit and/or current measuring unit (see rejection of claims 1 and 2).

**Regarding Claim 4**, Wang et al. teaches that the device is characterized in that the voltage generator, the voltage measuring unit and/or the current measuring unit may be brought into or are in active connection with a microprocessor or computer (*fig. 20*).

**Regarding Claim 5**, Wang et al. teaches that the second arrangement is characterized in that the voltage measuring unit and/or the current measuring unit is/are equipped with at least one analog filter, measuring amplifier, A/D converter and/or digital filter (col. 4, ll. 24 – 27).

**Regarding Claim 6**, Wang et al. teaches applying voltage to a region of interest (col. 5, ll. 17 – 19). Wang Nonetheless, as it would have been obvious to one of ordinary skill in the art at

the time the invention was made to generate a voltage with the range of 10 V and 200 V, since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only skill in the art. See *In re Aller*, 105 USPQ 233.

***Regarding Claim 7***, Kraus discloses that device is characterized by at least one frequency converter (col. 9, line 41 – Equation 1).

***Regarding Claims 8, 9, and 12 – 14***, Kraus discloses relevant characterizations (see rejection of Claim 1; col. 9, line 23 - col. 10, line 64; col. 13, 11. 16 - 18; and col. 14, 11. 9 – 15).

***Regarding Claim 10***, Kraus discloses that at least one coil arrangement, for changing the spatial position of the two sub-zones in the examination area, such that the magnetization of the particles varies locally (col. 13, ll. 9 – 14).

***Regarding Claim 11***, Kraus discloses that a coil arrangement, for changing the spatial position of the two sub-zones in the examination area by means of superimposition of an oscillating or rotating magnetic field, especially in the first sub-zone with low field strength (rejection of claim 1; col. 3, ll. 9 – 14 and 52 - 60; col. 9, ll. 65 - 67; and col. 11, line 58 - col. 12, line 5).

#### ***Response to Arguments***

**2. *Applicant's arguments filed January 4, 2010 have been fully considered but they are not persuasive.***

Applicant argues that “Wang et al. does not disclose a *transmit and/or receive unit comprising a voltage source*, as specifically recited in claim 1.”

Examiner respectfully disagrees. As the claim language specifies, there should be at least one arrangement comprising at least one electrical transmit *and/or* receive unit. As indicated in the rejection, Wang et al. provides this disclosure as depicted in *Figure 1* and *column 4, line 60 – column 5, line 55*. That is, Figure 1 of Wang et al. itself is the transmit/receive unit. Furthermore, Wang et al. indicates that a “number of electrical excitation sources, *such as* currents or *voltages* (*Fig. 1, 4*) are applied to one or more electrical contacts (*2*). See col. 5, ll. 17 – 20.

Applicant also argues that assertion that the featured ground terminal as a matter of design choice, for safety purposes to prevent the electrocution of the patient during examination is flawed; and that the object of interest would not be connected to the ground, but rather connected elsewhere, for providing safety to the patient.

Examiner respectfully disagrees. First of all, the claim language does not specify that the ground terminal *must be* connected to the object of interest, but rather that it is *applicable and/or* fastenable to the object. Therefore, the claim language is broad enough to encompass either the connection of the ground terminal to the patient *or* the *application* of the ground terminal within the *vicinity* of the patient. In that sense, it is still within the skill of one in the art to provide a ground terminal in conjunction with the transmit/receive unit for the safety of the patient. Furthermore, Examiner disagrees that a ground terminal would not be used for the patient's safety; and that it is not within the ordinary skill of art to use a ground terminal for such a purpose. As defined by Merriam-Webster Dictionary Online, a ground is “a large conducting body (as the earth) used as a common return for an electric circuit and as an arbitrary zero of potential.” Additionally, as it is known in the art, a ground terminal provides resistance

to control current. Therefore, it *is* within the skill and knowledge of one in ordinary art to apply a ground terminal within the vicinity of a patient for the patient's safety.

***Conclusion***

**3. THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VANI GUPTA whose telephone number is (571)270-5042. The examiner can normally be reached on Monday - Thursday (8:30 am - 6:00 pm; EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Long Le can be reached on 571-272-0823. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/V. G./  
Examiner, Art Unit 3768

/Long V Le/  
Supervisory Patent Examiner, Art Unit 3768